

Teaching the Digital Generation: No More Cookie Cutter High Schools

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Guiding principles for creating a new vision of schooling

1) Start by looking at kids and learning

This is a critical point. Traditionally, creating new schools has focused on teachers and instruction instead of kids and learning. But if we want to create schools that tailor instruction for maximum effect for digital learners, we must begin by looking at modern kids and how they learn. There is a growing body of research concerning digital learning styles and preferences as well as research on how the brains of today's young people function. This mounting body of work indicates that if we want to be effective in teaching modern students, then we need to look at different approaches to instruction.

2) Learning must prepare students for a world of constant change

Today's students will graduate into a world unlike anything we have ever seen before. 21st century life will be fundamentally different from the experiences most of us had growing up and exponentially different than life today. Astounding technological development is driving continual and ever increasing rates of change. In this environment we cannot look at the world of today, but must envision the world of tomorrow and the skills and knowledge students will need for success in that future world. Students must be provided with strategies for handling a world that is always on the move.

3) Learning must focus on 21st century thinking skills

Students require new basic skills to survive in 21st century life. These skills include problem-solving, decision making, time management, assessing the relative importance of information, and applying learning to accomplish real-world tasks. Higher level problem-solving abilities will be needed by an ever increasing number of people as an entry skill for the workplace. Memorization skills, while still needed, will decrease in importance in the age of anytime, anywhere access to online information sources.

4) Learning must include 21st century fluency skills

The explosion of the quantity of information available to the average person has already made information literacy skills a necessity in the modern world. But we must prepare students to go beyond being just literate with 20th century information skills to being fluent with these skills. Fluency means that these skills have been learned so well that their use is immediate and subconscious. Like riding a bike, kids don't think about it, they just do it. As for which skills should be taught, students need to learn much more than just information retrieval skills. They need to be taught how to process the information they retrieve to determine its significance in order to apply this knowledge to real world tasks. Further, as development of the online world progresses, students will need skills to process the new forms of information that will emerge. We live in a graphical world.

Students must be taught to communicate as effectively in the visual environment, as the older generation was taught to communicate in the text-based world. This means schools must include such skills as visual fluency, graphic design, and video production as basic skills that are taught to all students.

5) Learning must reflect the new digital reality

Instructional approaches must incorporate the latest technological tools to maximize the learning experience for students. In the very near future, online technology coupled with artificially intelligent software will transform the learning environment with powerful tools for discovery learning. Teachers must utilize the latest digital tools for engaging students in the task of learning. Learning tasks should be designed to utilize whatever digital tools are available for information retrieval, information processing, information publishing, simulations, and learning games. Every teacher and student must have their own digital device to use anytime, anywhere. Technology must be as integral to high school teaching and learning as it is to the world outside schools.

6) Learning must be interdisciplinary

The time of breaking things down into components and studying them independent of one another has long passed. True understanding comes only from a holistic approach that allows the student to see the interrelationships between the components of a process or system. Schools must break out of the mindset of departments and provide interdisciplinary learning. What we are saying is that schools need to make meaningful links between what is learned in Science and what is learned in Math and what is learned in Social Studies and what is learned in languages.

7) Learning must be shaped for the individual

The Industrial approach to instruction was “one size fits all” even if it didn’t fit very well. This approach is not very effective at meeting the needs of individual students. Research clearly indicates that kids learn at different rates and in different ways. If we want schools to be as effective as possible, then we must shape learning to the individual. In addition, students are growing up in a “made for me” world. They increasingly require, want, and expect their educational experience to be tailored to their individual needs, interests, and personal digital learning styles.

8) Learning must engage 21st century digital kids

Digital kids learn differently and have different learning preferences and styles than young people from previous generations. Traditional approaches to instruction are tolerable for digital kids, at best. At worst, they are tedious, boring, and counterproductive. New schools must look at the digital learning preferences of modern students and develop instructional approaches that incorporate digital, online, multimedia experiences into learning activities and resources.

9) Learning must be connected to the outside world

Students are most engaged and motivated, and learn best when they understand the relevance and application of their studies. Reaching out from the school to the world outside will have a twofold benefit. First, connections with the larger world outside the walls of the school will provide students with the real-world context for their learning. Second, teachers will be able to see clearly why and how instruction must change to keep up with changes in modern society.

10) Learning opportunities should be available 24 hours a day, 7 days a week

Anyone who has had teenagers knows that they keep hours that are frequently not in sync with the rest of the world. Often kids are ready to do their schoolwork after midnight. Schools should accommodate this by allowing anytime, anywhere access to learning resources and research materials. Online technology can facilitate this kind of access to the resources of the school. This will require a rethinking of the kinds of resources the school should provide. With digital technology providing access to learning resources from across the globe, the need for high school libraries with printed materials will diminish significantly. Web portals provide one stop access to educational resources for students much the same way Wal-Mart provides one stop access to products for consumers. In response to this, librarians must become digital research experts rather than just archivists. Therefore, much of the space traditionally allocated to libraries should be put to other uses.

11) Time should be flexible, not learning

Prisoners of Time stated, "For the past 150 years, American Public Schools have held time constant and let learning vary." (page 5) Because individual learning rates are different, by requiring all students to complete their learning on a particular topic or course within the same period of time, some students excel, some struggle, and some fail. If time is the constant as it is in most schools today, then learning becomes the variable. Think of this way: most people can travel 100 yards. Some will sprint it, some will jog it, some will walk it, and some may have to use a wheelchair. But the important point here is that given enough time, all can accomplish that task. The same principle applies to education. If we make mastery learning the target, and adapt our learning environments to support that goal, more students can be successful more of the time. The goal of schools must be learning for all students regardless of how long it takes.

12) Students should assume responsibility for their own learning

The need for constant supervision is largely generated by boring instruction on subjects that students see as irrelevant. When students see the value of their studies and the opportunity to succeed, they assume real responsibility for their time and conduct – and the teaching and learning environment can be extraordinarily different. High School instruction and time should be organized to help students exercise that responsibility.

13) Every student should have a close working relationship with at least one adult

The student and adult should work together closely and frequently throughout the student's school years. The adult should guide and support the student's studies, as well as to communicate with the student's parents. If treated as individuals and provided with close support, virtually every student can succeed.

14) Students should have their own personal place to work

Learning is the most important work done in high schools. Students must have more than lockers and temporary seats in classrooms in which to do that work. Every student must have access to a comfortable place on the campus to do individual independent work during the course of a typical school day.

15) Assessment must encompass skills of knowledge and higher order thinking

Content instruction alone may suffice for short-term memory and success on standardized tests, but if the content does not have personal relevance, it becomes boring for students and difficult to use in the real world. Written tests seldom require real world applications of that content. Beyond numeric grades, assessment must measure both facts learned and the application of those facts to solve real world problems. Assessment strategies must therefore be widened to include a broad range of measures for student achievement. This will provide a more complete assessment of all of the learning a student does in school. It will also ensure that teachers do not discard important learning activities simply because their outcomes are not stipulated. Assessment of higher order thinking skills must be an integral part of the teaching and learning process.

16) Every student must be prepared for some form of post-secondary studies

A high school diploma will not suffice for most jobs in the 21st century, It is critical that students, parents, and educators grasp the importance of ensuring that high school graduates are prepared for entry into post-secondary programs. To make this a reality, academic rigor in high school must not be "dumbed down" just to get students through. This will ensure that high school graduation will enable students who choose to, to go on to further education.

17) The configuration of spaces within the school building must be highly flexible

For example, just as ATM's have changed the time, place, and method of how people access financial services, new instructional technology will change the when, where, and how students access educational services. Given the accelerating pace of change in virtually every aspect of our society, it is probable that any high school built today will need to be modified substantially multiple times over its life to support evolving learning needs. We must create durable long-lasting school building shells that contain highly flexible inner spaces defined by easily modified partitions and furnishing systems that can be changed inexpensively in the future.